

Mushroom Identification for Foraging

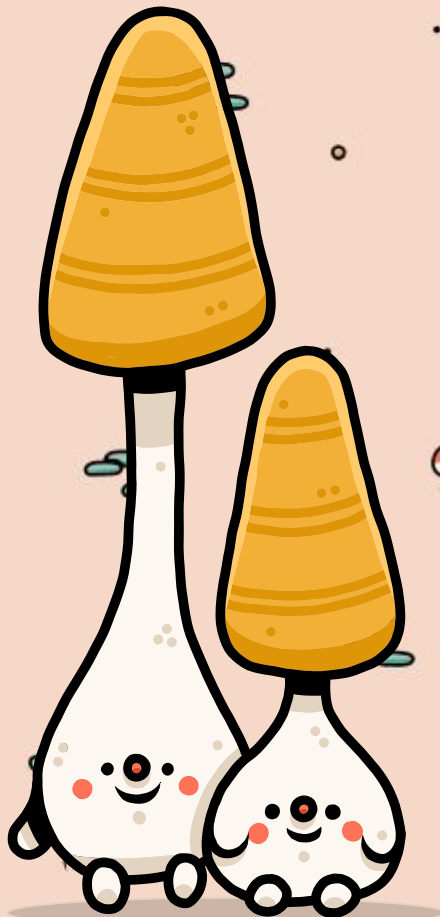


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Foragers on Fleek

Foraging for mushrooms is gaining popularity in many regions of the US.

The biggest barrier to entry is knowledge.



Workflow



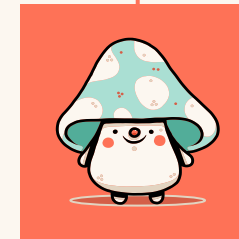
Gather Data

Data scraped from
Mushroom World



Pre Process Data

Categorizing data, splitting
off test data



Modeling

Define a baseline model
and tune to
improve precision

About the Data

905 Images

668 used for Training
237 reserved for Testing

Poisonous



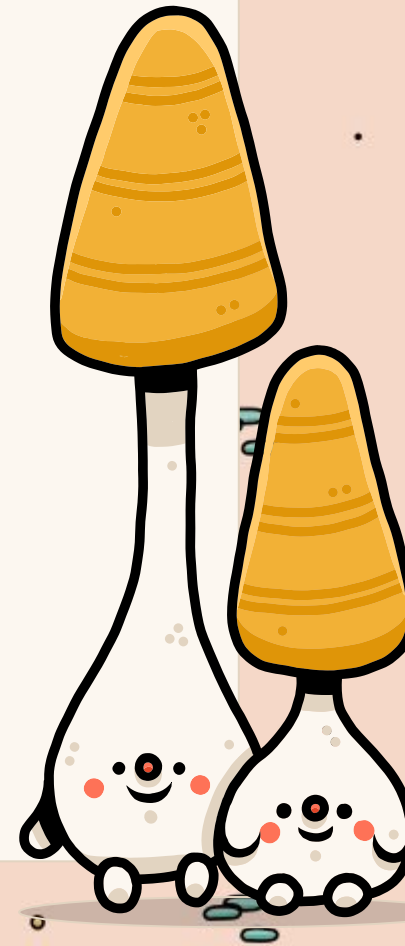
Edible



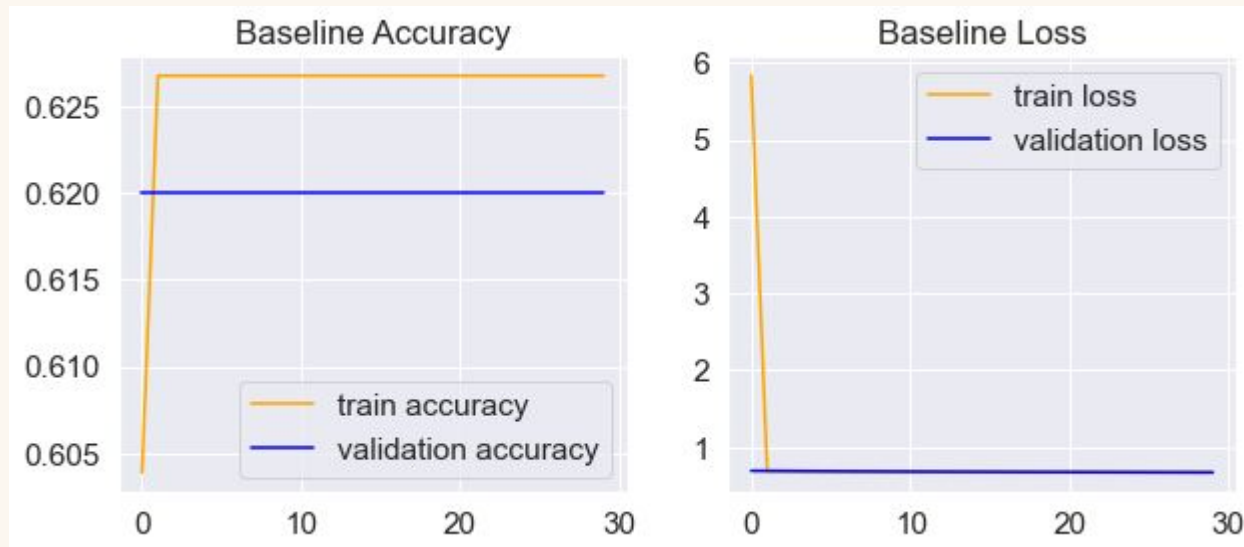
Pre Processing Data

Categorized data into Edible
and Poisonous

All Images resized to the
same scale



Baseline Model



From Baseline to Final

01

Baseline Model

Simple Sequential Model

02

Iterations on Baseline

Additional layers, filters, and kernels

03

Other Iterations

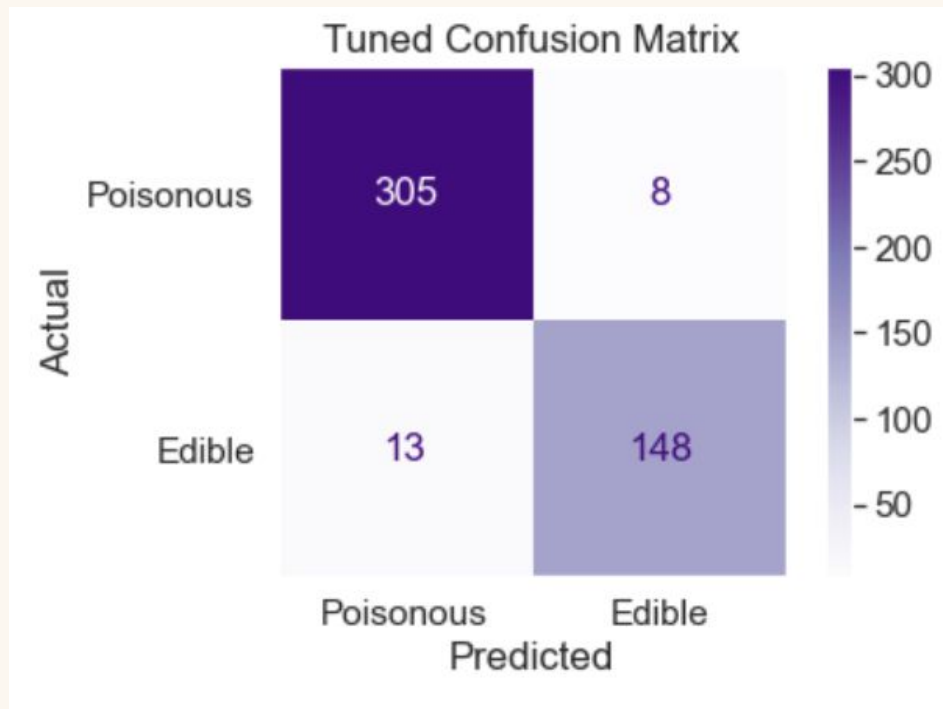
Applied various transfer learning models, used various optimizers

04

Final Model

Transfer Learning using VGG16 and SGD Optimizer

Final Model



Conclusions



Initial Precision

62% Precision

Misclassifying 90 Total
Poisonous Images.



Transfer Learning

Using VGG16 and SGD
Optimizer



Final Precision

91.9% Precision

Misclassifying 8 Total
Poisonous Images.

Next Steps



Train Model for Longer



Gather Additional Data



**Tune until 100%
Precision**



Build our App

Questions?

